PENDING CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-50 (canceled).

51. (Amended) A method of performing computed assisted diagnosis of a region of interest, comprising:

acquiring imaging scan data including at least a portion of the region of interest;

converting the imaging scan data to a volume representation including a plurality of voxels, at least a portion of the voxels representing a surface of the region of interest; and

analyzing said portion of voxels representing a surface to determine a context surface texture feature of the region of interest; and

analyzing said portion of voxels representing a surface to identify a local surface texture feature, different from the context texture feature, which is indicative of an abnormality[,] .

52. (Previously presented) The method of performing computed assisted diagnosis according to claim 51, wherein the local surface texture feature is included in a probability density function characterizing a correlation between two voxels of the portion of voxels.

53. (Previously presented) The method of performing computed assisted diagnosis according to claim 52, wherein the two voxels are adjacent voxels.

54. (Previously presented) The method of performing computer assisted diagnosis according to claim 52, wherein intensities of said portion of voxels are used to generate an estimate of the probability density function.

55. (original) The method of performing computer assisted diagnosis according to claim 54, wherein a plurality of voxel intensities are used to generate a cumulating distribution function of the region of interest and a local cumulating distribution function, and wherein the local cumulating distribution function is compared against the context cumulating distribution function to identify regions of abnormality.

56. (original) The method of performing computer assisted diagnosis according to claim 55, wherein a distance is determined between said local cumulating distribution function and said context cumulating distribution function, the distance providing a measure of abnormality.

57. (original) The method of performing computer assisted diagnosis according to claim 56, wherein the distance is used to assign intensity values to the voxels representing a surface of the region of interest and wherein said method further comprises displaying said voxels such that variations in intensity represent regions of abnormality.

58. (original) The method of performing computer assisted diagnosis according to claim 57, wherein the region of interest includes the colon and wherein the abnormality includes polyps.

59. (original) The method of performing computer assisted diagnosis according to claim 51, wherein the region of interest includes the aorta and wherein the abnormality includes abdominal aortic aneurysms.

60. (canceled)

61. (canceled)

62. (Previously presented) A method of performing computed assisted diagnosis of a region of interest, comprising:

acquiring imaging scan data including at least a portion of the region of interest;

converting the imaging scan data to a volume representation including a plurality of voxels, at least a portion of the voxels representing a surface of the region of interest; and

analyzing said portion of voxels representing a surface for both a geometric feature and a local surface texture feature indicative of an abnormality.

63. (Previously presented) The method of performing computed assisted diagnosis according to claim 62, wherein the local surface texture feature is included in a probability density function characterizing a correlation between two voxels of the portion of voxels.

64 (Previously presented) The method of performing computed assisted diagnosis according to claim 63, wherein the two voxels are adjacent voxels.

65. (Previously presented) The method of performing computer assisted diagnosis according to claim 61, wherein intensities of said portion of voxels are used to generate an estimate of the probability density function.

66. (previously presented) The method of performing computer assisted diagnosis according to claim 65, wherein a plurality of voxel intensities are used to generate a cumulating distribution function of the region of interest and a local cumulating distribution function, and wherein the

local cumulating distribution function is compared against the context cumulating distribution function to identify regions of abnormality.

67. (previously presented) The method of performing computer assisted diagnosis according to claim 66, wherein a distance is determined between said local cumulating distribution function and said context cumulating distribution function, the distance providing a measure of abnormality.

68. (previously presented) The method of performing computer assisted diagnosis according to claim 67, wherein the distance is used to assign intensity values to the voxels representing a surface of the region of interest and wherein said method further comprises displaying said voxels such that variations in intensity represent regions of abnormality.

69. (previously presented) The method of performing computer assisted diagnosis according to claim 68, wherein the region of interest includes the colon and wherein the abnormality includes polyps.

70. (previously presented) The method of performing computer assisted diagnosis according to claim 62, wherein the region of interest includes the aorta and wherein the abnormality includes abdominal aortic aneurysms.

71. (previously presented) The method of performing computer assisted diagnosis according to claim 62, wherein the surface is represented as a second differentiable surface where each surface volume unit has an associate Gauss curvature and wherein said Gauss curvatures combine to form said geometric features.

72. (previously presented) The method of performing computer assisted diagnosis according to claim 62, wherein a plurality of predetermined geometrical feature templates are defined and wherein the geometric features of said surface are compared to said templates to determine a geometric feature classification.